

**These are the Draft Plans of Emission Reduction Strategies for the Appalachian Region submitted for the
December 10, 2003 Early Action Compact Milestone.**

Early Action Compact Milestone - December 2003
List of Emission Reduction Strategies Under Consideration
Oconee County

According to the latest 8-hour ozone monitoring data, Oconee County should remain attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Oconee County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. Oconee County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Ozone Action Coordinator	Designation of county staff person to coordinate education efforts and dissemination of ozone related information	N/A	July 2003	Countywide
Ozone Reduction Meetings	Coordination of meetings with municipalities, stakeholder groups, the public, and other entities	N/A	2004	Countywide
Lower Emissions in County Fleet	Utilize Capital Improvement Plan to initiate annual review of vehicle and equipment fleet. Upgrade and replace older, less-fuel efficient vehicles and equipment as budget allows; replace improperly operating catalytic converters.	N/A	2003	County Government
Energy-efficient Buildings	Utilize Capital Improvement Plan to initiate annual review of needed upgrades to county-owned buildings and facilities. Resulting construction and maintenance projects to result in highest level of energy-efficiency practical for the structures.	N/A	2003	County Government
Reduce Speeding on Highways	County shall support efforts by County Sheriff to emphasize speed and traffic control (this may or may not include expansion of Traffic Control Division of Sheriff's Department)	N/A	2004	Countywide
Greenspace Regulations	Amend Land Development and Subdivision Regulations to require minimum areas of greenspace and trees in all new county-approved subdivisions	N/A	2004	Countywide
Ozone Reduction in Comprehensive Plan	Include emission reduction efforts as a major goal in the updated Comprehensive Plan	N/A	2004	Countywide
Intergovernmental Cooperation	Encourage and assist municipalities in taking an active role in countywide emission reduction efforts. This may include supporting efforts by municipalities to develop and expand mass transportation facilities	N/A	2004	Countywide

Pickens County Early Action Compact Milestone - December 2003

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist <insert county name> in achieving and/or maintaining the 8-hour ozone standard by 2007 and beyond.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Public Relations	No action will be taken on any Public Relations development until the DRAFT EAC is evaluated by SCHEC/EPA.	None	Originally, 7/2003. Delayed to 7/2004.	County wide program implemented by County administration
Ozone Adv Comm	County adding: 1) Mass Transit Assessment -- US Hwy 123, 2) School Busing Assessment as additions to County's DRAFT EAP. Other committee action pending DHEC review of DRAFT Local EAP.	None	Originally 3/2003. Completed on schedule, and ongoing.	County wide program implemented by County administration
Heavy Diesel Retrofits/Alternative Fuel for County Fleet	County is developing inventory of heavy diesels. Ongoing study of tech's and synergy with other options. Heavy diesel retrofitting lowered in priority due to cost, poor NOx reduction. Alternative fuel B10 or B20 appears to be a valid option until ULSD availability.	None	Originally, 4/2004. Currently, 4/2004.	County-owned vehicle pool administered by County administration
Catalytic Convertor County Fleet	Evaluating fleet emissions maintenance. Develop SOP if needed to meet mfg'r's recommendations.	None	Originally, 4/2004. Currently, 4/2004.	County-owned vehicle pool administered by County administration
Landfill Methane	Methane extraction system under construction at Easley Landfill. Flaring to begin in January, 2004.	None	Originally, 4/2004. Currently, 1/2004.	Municipal Landfill owned/operated by County administration.
Park & Ride	Park & Ride Program discussed with Pickens County Economic Development Director and private stakeholders. Coordination with development of Mass Transit program.	None	Originally, 4/2004. Delayed to 4/2005.	County wide program implemented by County administration
Contract Specs	Will develop SOP for combustion engine purchases and for contract services received from operators of mobile sources.	None	Originally, 7/2003. Delayed until 1/2004.	County-owned equipment pool administered by County administration
Carpooling	No Action at this time.	None	Originally, 8/2004. Currently, 8/2004.	County wide program implemented by County administration
No-Idling Policy	"No-Idling" Policy developed for Pickens County in September, 2003	None	Originally, 4/2004. Completed, 9/2003.	County-owned vehicle pool administered by County administration
Property Tax Rules	No Action at this time. Requested information from Assessor on property tax rule amendments.	None	Originally, 1/2005. Currently, 1/2005.	County wide program implemented by County administration
CATS Ridership/ Route Dvlpmt (Added 12/2003)	Assessment for County participation in expansion of CATS routes along US Hwy 123. Participation requires finding sources and support from local business, cities, and SCDOT.	None	Originally, 4/2004. Expanded scope and rescheduled to 8/2005.	County wide program implemented by County administration
School Bus Program (Added 12/2003)	County to offer assistance to School District to improve Bus ridership, school parking permits, special restrictions for air quality, May-June emphasis, Traffic control	None	8/2004 or 2005	County administration to assist County School District in County-wide program

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist Cherokee County, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed Date for Implementation	Geographic Area and/or Local Government
1. Support SCDHEC statewide efforts to reduce ozone levels. Priority A	<ul style="list-style-type: none"> Develop stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx – BACT (Best Available Control Technology Economically Achievable), restrict open burning). 	Equivalent to removing 359,500 cars from the road or 7190 tons of VOC	Ongoing	Area: Countywide. Agency: SCDHEC, local governments.

Findings

- a. The NOx Control Regulation will directly affect most combustion sources:
 - i. NOx control regulations require technology that meets "BACT limits found in the BACT/BACT/LAER Clearinghouse" for all new or modified sources of NOx. DHEC Response to Comments, "Boilers" (July 16, 2003).
 - ii. Low NOx burners ("LNB") or the equivalent are required technology for existing sources replacing burners, and new construction must meet NOx Guidelines. NOx Control Regulations, Sections III-IV.
 - iii. DHEC "cannot to date predict with any accuracy what additional reductions [in NOx levels]" will be achieved from the NOx Control Regulation, if any, for the Upstate in excess of current strategies. DHEC Response to Comments, S.C. Chamber of Commerce, Response to No. 8.
 - iv. DHEC modeling shows attainment without the NOx Control Regulation by 2010. Id.
 - v. Technology upgrades and tune-up requirements will incur capital and operations/maintenance costs. A cost/benefit analysis is not complete on the regulations, but costs are believed to be outweighed by costs of non-attainment. Id.
- b. VOC Best Available Control Technology ("BACT") regulations are proposed for any new source construction permit where the net VOC emissions increase is 100 TPY since July 1, 1979:
 - i. The "actual emissions" definition is revised to be more stringent than Federal standards by limiting the analysis to "the average rate, in tons per year, at which the unit actually emitted [VOC] during a two-year period which preceded the particular date and which is representative of normal source operations." Draft R.61-62.5, Standard No. 5.1, Section I.A.3 (April 28, 2000).
 - ii. VOC BACT will be triggered by "new construction" when the "net VOC emissions increase exceeds 100 tons per year" since July 1, 1979. Id. at Section II.B.
 - iii. DHEC has not conducted modeling on the affects of the more stringent BACT for VOCs on ozone levels in the Upstate.

Advantages

- a. NOx Control Regulations:

Priority A: those strategies that should be implemented in the short term. **Priority B:** those strategies that should be implemented in the long term.

- i. Modeling the affect on ozone attainment by the NOx Control Regulation will give certainty to the cost benefit analysis, the anticipated affects on a designation of non-attainment, and implementation of the EAC plans in the Upstate.
 - ii. Revisions to the NOx Control Regulation for technology requirements may preclude industrial development and expansion in Upstate.
 - iii. If modeling demonstrates ozone reductions, the state-wide regulation would reduce costs of non-attainment for the Upstate.
- b. VOC BACT Control Regulations:
 - i. The proposal substantially increases the number of sources subject to BACT controls for VOCs, and VOCs are a precursor to ozone.
 - ii. If modeling demonstrates ozone reductions, the state-wide regulation would reduce costs of non-attainment for the Upstate.

Disadvantages

- a. NOx Control Regulations:
 - i. The EAC plan, in part, is being pursued to avoid costly limits on industrial growth like BACT technology requirements, so the NOx Control Regulation undermines that objective. The need for the EAC is diminished as a result.
 - ii. BACT technology for replacements and combustion burners as required could prove costly and deter industrial development in Upstate.
 - iii. The NOx reduction from a state-wide NOx Control Regulation are not modeled and are unknown.
- b. VOC BACT Control Regulations:
 - i. The costs of BACT to local industry may be significant, including deterrence to industrial development and expansion in the Upstate.
 - ii. The applicability of BACT-like standards to sources less than 250 TPY was a primary rationale for undertaking the EAC process to avoid non-attainment; adopting the regulation in the Upstate jeopardizes the rationale.
 - iii. The regulation changes presume the most recent two years are representative of pollutant loadings for the plant; allowing comparison to any two consecutive years over the past ten years would more accurately represent normal industry operations.
 - iv. Modeling, to date, does not demonstrate reduction in VOCs under the BACT Regulation and will have an affect on ozone levels in the Upstate.

Recommendation

- a. Further evaluate statewide NOx Control Regulations until modeling demonstrates a reduction in ozone levels in the Upstate will result.
- b. Further evaluate statewide VOC BACT Control Regulations until modeling demonstrates a reduction in ozone levels in the Upstate will result.

Cost of implementation

Cost/benefit analysis underway

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed Date for Implementation	Geographic Area and/or Local Government
5 Use of alternate fuels. Priority B	<ul style="list-style-type: none"> Encourage the use of alternate fuels; Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles 		Ongoing	Area: Countywide. Agency: local businesses and local governments.

Findings

- Current studies have shown that California may be wrong regarding the cost of ethanol as an oxygenated fuel. Currently ethanol studies have shown that ethanol will save over 6.6 cent per gallon of gasoline under the current market forces and prices.
- Ethanol was found to reduce ozone in California by the U.S. Federal Court. The Court upheld the USEPA's decisions to use ethanol as an oxygenate, but remanded the decision to the USEPA to consider the effects on particulate emissions. The Renewal Fuels Association does not believe that ethanol will have an adverse effect on particulate manner.
- Current studies have show that there is an adequate supply of ethanol and reasonable cost associated with the transport of ethanol.
- Government Agencies in Columbia, SC are planning to demonstrate the use of ethanol in fleet vehicles.
- A could generate about 80 million dollars in revenue.
- A 40-million gallon annual production facility for ethanol typically is over a \$ 50 million dollar investment and creates over 1000 jobs based upon investment dollars by typical chamber of commerce ratios.
- The production of ethanol is expected to double with passage of an energy bill by U.S. Congress and to replace MTBE, a water-poisoning oxygenative fuel. Oxygenative fuels are mandated by USEPA to reduce ground-level ozone.
- Ethanol/fuel mixes have determined to reduce carbon monoxide (CO) and ground-level ozone from the reduction of carbon monoxide.
- Ethanol Plants in South Carolina have the potential to sell to two large markets; Charlotte and Atlanta.
- Biodiesel also reduces emissions of ozone-causing emissions, thus improves air quality.
- Ethanol and Biodiesel plants would support the Governor's economic plan which focuses on agriculture.
- Current modern ethanol plants produce twice the energy that they consume.
- Future, high-tech ethanol plants could produce three times the energy that they consume. A High-tech ethanol start-up is looking to locate in South Carolina.

Advantages

- Ethanol could provide for economic growth.
- Ethanol and Biodiesel could reduce ground level ozone.

Disadvantages

-

Cost of implementation

Cost per Ton: Not figured yet.

Potential Revenue Sources

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

- Private investment and Federal Grants.
- State grants from the Energy Office for E-85 for local governments fleets.

Conclusion

Ethanol and Biodiesel production facilities are worth pursuing as a long-term strategy for the State.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed Date for Implementation	Geographic Area and/or Local Government
6. Use of hybrid vehicles. Priority A	<ul style="list-style-type: none"> Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract. 		Local governments as soon as practical.	Area: countywide. Agency: local governments.

Findings

- a. The use of conventional cars impose external costs on society, i.e., environmental pollution, health problems attributed to air pollution, greenhouse gases, changes in climate, dependence on imported oil, and cost of securing oil supplies. These external costs are usually borne by governments; therefore, there is justification for governments to pay the incremental cost of purchasing HEVs for their fleets. Not only will governments help with relieving society from the external costs imposed by conventional cars, but they will also help in building up the demand of HEVs. This would allow manufacturers to reduce their costs to the point where HEVs become attractive at the retail level. (<http://www.gvsc.ca/hybrid.html#today>)
- b. Hybrid vehicles use two or more sources of power. Currently, these vehicles use electricity generated from batteries and mechanical power generated by an internal combustion engine.
- c. Hybrid electric vehicles produce low emissions and more miles per gallon.
- d. HEVs never have to be plugged in to recharge the batteries since they recharge as the vehicles operate.
- e. The federal government provides tax incentives to individuals who purchase new clean fuel vehicles or HEVs
- f. Federal and private funding sources for R&D: the federal government, through the Department of Energy, has partner with automobile manufacturers to share the cost of developing a comprehensive HEV research and development program.
- g. Manufacturers are also addressing off-highway applications with the production of hybrid trucks, trams and shuttle buses. (<http://www.evi-usa.com/aboutus.htm>)
- h. Toyota (Prius) and Honda (Insight and the Civic Hybrid) have produced hybrid vehicles.
- i. Ford introduced its concept environmentally friendly SUV in April 2003. The Ford Escape Hybrid will be available to consumers in late summer 2004 and identified fleet customers later in 2003. (<http://www.fordvehicles.com/escapehybrid/frameset.asp>; <http://www.hybridcars.com/default.htm>).
- j. Ford also announced that the new 2006 Ford Futura mid-size car will be its next hybrid vehicle and it is planning to launch it in 2005.
- k. General Motors (<http://www.ott.doe.gov/hev/gmaccomp.html>) plans to launch several new HEV models between model years 2004 and 2007 as follows:
 - a. 2004: The Chevrolet Silverado and GMC Sierra. These will be available first to fleets; in fall 2004 they will be available to the public.
 - b. 2005: The Saturn Vue will carry a Super Ultra Low Emissions Vehicle rating.
 - c. 2006: The Chevrolet Equinox SUV.
 - d. 2007: The Chevrolet Tahoe and the GMC Yukon SUVs. This same year GM will offer the hybrid system used on the Equinox on the Chevrolet Malibu sedan.
- l. DaimlerChrysler (<http://www.ott.doe.gov/hev/dcacccomp.html>) plans to release the hybrid Dodge Ram pickup in 2005 and the Mercedes S-class in 2006.
- m. Also Mitsubishi, Nissan, Fiat, Renault, and Subaru are developing their own HEVs. (http://www.ott.doe.gov/hev/faqs_ans1.html)

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

- n. It is unclear if the majority of consumers are aware of the existence of the new technology and benefits that HEVs offer, i.e., improved air quality, health and financial incentives. Manufacturers and local dealers should establish a more aggressive marketing campaign describing these benefits to create consumer awareness of their availability locally.
- o. Motorists traveled more than 2.8 trillion miles in 2002 in the country. (<http://money.cnn.com/2003/07/18/pf/autos/bc.autos.deaths.reut>)
- p. There are 22 million SUVs on U.S. roads. This is approximately 10 percent of the total number of vehicles. (<http://money.cnn.com/2003/07/18/pf/autos/bc.autos.deaths.reut>)
- q. State and local governments around the country are purchasing HEVs for their fleets. For example, SCDHEC purchased a Toyota Prius and a Honda Insight; King County, WA purchased twenty (20) Toyota Prius cars at a total cost of \$375,000. (<http://www.metrokc.gov/procure/green/bul66.htm#1>)
- r. National initiative to assist state and local governments purchase low-emission, energy-efficient fleet vehicles: this national purchasing alliance will allow local and state agencies to pool their purchasing power. By doing it, agencies will obtain fuel-saving hybrid vehicles with favorable contract provisions. The leading agency will be King County, Washington. King County and the project sponsors will develop the national solicitation for hybrid vehicles over the next few months. U.S. Communities, the National Association of Counties (NACo), and the Center for a New American Dream sponsor this program. State, county, city, school, and regional government entities will be able to join the solicitation once it is complete. The solicitation will be available for bidding in late 2003 or early 2004. Other national founding co-sponsors include: the National Institute of Governmental Purchasing (NIGP), National League of Cities (NLC), the U.S. Conference of Mayors (USCM) and the Association of School Business Officials International (ASBO). No fees will be charged to public agencies to access and use these contracts. (<http://www.afdc.nrel.gov/whatsnew.shtml>)

Advantages

- a. Improve air quality by producing less pollution. HEVs emissions meet the Ultra Low Emission Vehicle (ULEV) regulations that exists today (the strictest are the zero emission vehicles – ZEVs) (<http://www.gvsc.ca/hybrid.html>).
- b. Reduce global warming by cutting greenhouse emissions.
- c. Save money by taking advantage of the one-time federal income tax deduction or federal tax credits when purchasing a brand new vehicle and by refueling less often as HEVs travel up to 700 miles between fill-ups.
- d. Save fuel consumption and reduce exhaust emissions, e.g., when the vehicle is idle, the engine in hybrid vehicles turns "OFF" and turns "ON" when is accelerated. Fuel economy is about twice that of conventional cars (<http://www.gvsc.ca/hybrid.html>)
- e. Use of electric outlets to recharge battery is not needed, e.g., hybrid vehicles do not need to be plugged in to an electric outlet to recharge batteries.
- f. Reduce reliance on imported oil.
- g. Improve mileage per gallon.
- h. There is no need to develop new infrastructure to refuel HEVs as they currently use gasoline for the internal combustion engines.

Disadvantages

- a. The incremental cost of HEVs is about US \$6,000 more than comparable conventional vehicles (<http://www.gvsc.ca/hybrid.html>). The cost of purchasing HEVs up front may be high for a new vehicle; however, this is somehow offset by the tax incentives that the federal income tax and some States offer (see strategy #12).
- b. HEVs may not be available on time locally for mass retail purchases to meet the new air quality standards established by EPA by 2007. This, however, maybe reversed by the national initiative to assist state and local governments to purchase HEVs led by King County, WA, which would increase the demand of HEVs provided there is enough participation from these agencies.
- c. Sometimes owners must deal with inherited mechanical problems that new technologies create until manufacturers acquire sufficient knowledge to fix those problems before new HEVs leave manufacturing plants. This is more a nuisance for the owner than a cost, as manufacturers provide warranties that cover the repairs.

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

- d. It would be hard to change consumers' minds to purchase HEVs in mass, as conventional vehicles have been available in the market for the past several decades.

Cost of implementation

Cost per Ton: to be determined later.

Potential Revenue Sources

- a. Grants from USEPA to local governments:
 - i. In 2001, King County, WA received a grant from EPA as part of a new national transportation partnership program to purchase hybrid vehicles for its fleet.
 - ii. King County received a grant to purchase hybrid cars for the local Flexcar program, a county-supported car-sharing program. "Carsharing is similar to car rental; the main differences are that an individual can use the carsharing vehicle for as short a time period as one hour, and that the cars are located in the communities rather than at a central car rental location." (<http://www.commuterpage.com/carshare.htm>)
 - iii. It is unclear whether EPA is currently providing grants to local governments to purchase HEVs.

Conclusion

The expanded use of HEVs would definitely improve the air quality in the Upstate. To create consumer awareness, manufacturers and, especially, local dealers should establish a more aggressive marketing campaign describing the benefits that purchasing and driving HEVs provide financially and to the environment. The Air Quality Steering or Staff Advisory Committees should meet with local car dealers to discuss topics such as the availability of HEVs in the Upstate, how dealers perceive the outlook of the demand of HEVs in the area, etc.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed Date for Implementation	Geographic Area and/or Local Government
11. Promote route efficiency for delivery vehicles, trash collection etc. Priority A	<ul style="list-style-type: none"> Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage. 		2004	Area: countywide. Agency: Chambers of Commerce

Findings

- Identify and establish a Clean Air Partnership between, local business, municipalities, counties, and the state and local government agencies that do service locally with fleets.
- This could include everyone from school buses to Fed Ex, to US Post Office, to Garbage and Recycling Collection.
- Develop and implement an educational and marketing plan on what the emissions impact and savings could be on these fleets should everyone work to maximize efficiency and then sell it to the participants.

Advantages

- Getting everyone to work together and educate on them on the problem and possible solutions.
- Reduction in fuel emissions.

Disadvantages

- Convincing some that there may be more benefit in the long run to adopting a strategic plan on this rather than solely considering the bottom line profit margin of their business and making small sacrifices to help the situation.
- Convincing everyone to come to the table.

Cost of Implementation

Cost per Ton

Potential Revenue Sources

None

Conclusion

Getting business and agency fleets to operate using an "environmentally friendly" mentality while understanding their need to turn a profit and continue providing quality service.

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed Date for Implementation	Geographic Area and/or Local Government
12 Establish an active public awareness campaign. Priority A	<ul style="list-style-type: none"> Develop an editorial board to discuss air quality issues and development of a relationship with media. <ul style="list-style-type: none"> Use alert messages year round, not only during ozone season. Utilize public service announcements, newspapers, weather channels, and other media outlets to notify citizens of high ozone days. Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach - Communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles. 		2004	Area: countywide. Agency: local governments, local media, health organizations, and Chambers of Commerce.

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

Findings

- a. USEPA and SCDHEC have developed educational resources that can be enhanced and tailored to meet local needs for presentations, seminars, and websites: www.epa.gov/airnow/resource.html, www.scdhec.net/bag/
- b. Local website on Upstate Early Action Compact and Plan also available: www.upstatecleanair.org/
- c. Excellent website from State of Illinois "Partners for Clean Air": www.cleantheair.org/
- d. Others:
 - i. North Carolina Dept. of Environmental and Natural Resources: www.daq.state.nc.us/
 - ii. Virginia Department of Environmental Quality: www.deq.state.va.us/
 - iii. New Jersey Department of Environmental Protection: www.state.nj.us/dep/airmon/
 - iv. National Safety Council Environmental Health Center: www.nsc.org/ehc/airqual.htm
 - v. EPA Australia: www.epa.nsw.gov.au/air/index.htm
 - vi. Environment Canada: www.msc.ec.gc.ca/eq_smog/index_e.cfm
 - vii. Ministry of the Environment Ontario: www.airqualityontario.com/
 - viii. American Lung Association: www.lungusa.org/air/
 - ix. Atlanta Chamber of Commerce: www.metroatlantachamber.com/macoc/initiatives/air_new.shtml
- e. January 1997, the Envision Utah Public/Private Partnership was formed to guide the development of a broadly and publicly supported Quality Growth Strategy - a vision to protect Utah's environment, economic strength, and quality of life for generations to come. Air quality was first on the list of six goals the project addresses. One of the first steps during the project has been to engage decision-makers, elected officials, community leaders, and the public in a public awareness campaign to share information about the project. Only when these stakeholders understood the issues could the process to improve existing conditions and plan for the future begin to move forward. <http://www.envisionutah.org>
- f. CA Air Resources Board's outreach campaign <http://www.arb.ca.gov/msprog/zevprog/2001rule/outreach.pdf>
- g. CA Air Resources Board's Incentive Program <http://www.arb.ca.gov/msprog/zevprog/zip/zipguidelines.pdf>

Advantages

- a. Issues related to environmental protection have only recently begun to find their way into the public psyche, and often an extensive public awareness campaign precedes any meaningful change in behavior or policy. For example, the "Anti-Litter" campaigns have led to a greater understanding of the impacts of litter on the environment, both from a health (e.g., water quality) and aesthetic perspective. A public awareness campaign targeting air quality can have the same results.
- b. Can reach almost everyone through television, radio, Internet, group presentations, newsletters, and conferences.

Disadvantages

- a. It is difficult to quantify the impact of a public education campaign.
- b. Some people would not be reached.
- c. Potential cost could be a deterrent.

Cost of implementation

Cost per Ton: Unknown.

Potential Revenue Sources:

- a. In-kind donations (e.g., media outlets, PR firms, corporate partners, health and related agencies, active living advocates) can significantly reduce costs.
- b. All appropriate public and private funding sources including grants can be used.

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.

- c. License plate program and other fees may be potential revenue sources.

Conclusion

Recommended components:

- a. Education campaign with quantified economic impacts for target audiences:
 - i. Elected officials, policymakers, community leaders.
 - ii. Air quality committee members.
 - iii. Transportation and land use planners, officials.
 - iv. Owners of registered vehicles.
 - v. General public.
- Emphasize incentive: do not want non-attainment status
- b. DHEC's Spare the Air campaign.
- c. Website
 - i. Each region, with links to DHEC and EPA information and with up-to-date local information
- d. PSAs on specific, short topics, (Title: "On the Air"), for example:
 - i. Best time to refuel.
 - ii. Topping off tank.
 - iii. Leave ½ hour earlier or later to avoid congestion.
 - iv. Combine errands into fewer trips.
 - v. Advantages of using public transit.
 - vi. Advantages of creating development policies that encourage transit use and/or non-motorized transportation (sidewalk development, transit-oriented development, multi-use development, proposed state law for neighborhood schools).
 - vii. Highlight programs that encourage non-motorized transportation (ex. Safe Routes to School, enhancement program).
 - viii. Factoids, e.g., What is smog?, Rate of respiratory illnesses (Spartanburg number one in South Carolina)
 - ix. Emphasis on those PSAs associated with an action or behavior change.

Priority A: those strategies that should be implemented in the short term. Priority B: those strategies that should be implemented in the long term.
